

Applicants: Parruck et al.
Serial No.: 09/539,461
Filing Date: March 30, 2000
Docket No.: AZA-006

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application. No claims are cancelled, added or withdrawn by this amendment.

Listing of Claims

1. (currently amended): A switching arrangement for switching an ATM cell having an ATM cell header, comprising:
 - a first circuit configured to receive said ATM cell;
 - a second circuit coupled to said first circuit, said second circuit creating a packet header having at least a portion of the information contained in said ATM cell header and ~~to attaching~~ attaching said packet header to said ATM cell, thereby forming an ATM cell-containing packet;
 - a packet switch device configured to switch packets among a plurality of ports, said packet switch device being operatively coupled to said second circuit to receive said ATM cell-containing packet through a first port and to switch said ATM cell-containing packet to a second port as if said ATM[-]cell-containing packet is a packet of the type normally switched by said packet switch device; and
 - a third circuit operatively coupled to said packet switch device for receiving said ATM cell-containing packet, said third circuit identifying said ATM cell-containing packet as a packet containing an ATM cell, said third circuit removing said packet header to recover said ATM cell.
2. (original): The switching arrangement of claim 1 wherein said packet is an IP packet.

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3. (original): The switching arrangement of claim 1 wherein said packet switching device is part of a router.

4. (currently amended): A method for allowing both packets and ATM (Asynchronous Transfer Mode) cells ~~and packets~~ to be routed via a packet switch, said packet switch routing packets that conform to format requirements, comprising:

- receiving said packets at a first circuit;
- receiving said ATM cells at a second circuit;
- formatting said ATM cells to fit said format requirements of said packet switch, thereby creating ATM cell-containing packets; and
- forwarding both said packets and said ATM cell-containing packets to said packet switch for routing.

5. (original): The method of claim 4 wherein said formatting includes padding said ATM cells with additional bits.

6. (original): The method of claim 4 wherein said ATM cells are formatted at a first card that is implemented separately from a second card implementing said packet switch.

7. (original): The method of claim 5 wherein said first card and said second card are coupled via an optical fiber.

8. (original): The method of claim 6 wherein said optical fiber carries data originally contained in both said ATM cells and said packet switch.

9. (original): The method of claim 4 wherein said first circuit and said second circuit are implemented on a single line card.

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10. (original): The method of claim 8 wherein said formatting includes associating said ATM cell-containing packets with tags, said tags allowing a receiver circuit receiving said ATM cell-containing packets from said packet switch to identify said ATM cell-containing packets as packet-like series of bits having therein ATM cells.

11. (currently amended): The method of claim 10 wherein said formatting includes associating said ATM cell-containing packets with packet headers, said packet headers allowing a receiver circuit receiving said ATM cell-containing packets from said packet switch to identify said ATM cell-containing packets.

12. (original): The method of claim ii wherein said formatting includes ascertaining destination information for a given ATM cell to be switched, and putting said destination information into a packet header to be included in a given ATM cell-containing packet, said given ATM cell-containing packet representing a packet-like series of bits having therein said given ATM cell.

13. (original): A router for routing both ATM cells and packets received from a plurality of router input ports to a plurality of router output ports, comprising:

- a first circuit for receiving said ATM cells;
- a second circuit for receiving said packets;
- a third circuit coupled to said first circuit and said second circuit for aggregating selected ones of said ATM cells and selected ones of said packets into a combined data stream that contains data from both said selected ones of said ATM cells and said selected ones of said packets and outputting said combined data stream; and
- a switch coupled to said third circuit for receiving said combined data stream, said switch directing information pertaining to individual ones of said selected ones of said ATM cells and said selected ones of said packets to respective ones of said plurality of router output ports, said respective ones of

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said router output ports being ascertained from packet headers associated with said information pertaining to individual ones of said selected ones of said ATM cells and said selected ones of said packets.

14. (original): The router of claim 13 wherein said first circuit, said second circuit, and said third circuit are implemented on a first line card.

15. (original): The router of claim 14 wherein said switch is implemented on a second line card that is different from said first line card.

16. (original): The router of claim 15 wherein said first line card and said second line card are coupled via an optical fiber, said optical fiber being configured to transport said combined data stream.

17. (original): The router of claim 13 further comprising a traffic management circuit coupled to said third circuit, said traffic management circuit monitoring said ATM cells and said packets to ascertain transmission priorities associated with individual ones of said ATM cells and said packets, said third circuit selecting said selected ones of said ATM cells and said selected ones of said packets for outputting in said combined data stream based on the transmission priorities.

18. (original): The router of claim 14 wherein a given flow associated with said ATM cells is given a minimum bandwidth guarantee by said traffic management circuit, thereby guaranteeing that at least some ATM cells associated with said given flow is passed onto said switch irrespective of traffic condition through said third circuit.

19. (original): The router of claim 14 wherein a given flow associated with said packets is given a minimum bandwidth guarantee by said traffic management circuit, thereby guaranteeing that at least some ATM cells associated with said

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given flow is passed onto said switch irrespective of traffic condition through said third circuit.

20. (currently amended): The router of claim 13 further including circuitry for attaching a packet header to each of said ATM ~~packets~~cells, thereby rendering said each of said ATM ~~packets~~cells substantially packet-like for switching by said switch.

21. (currently amended): The router of claim 20 further including circuitry for ascertaining destination information pertaining to a destination associated with a given one of said ATM ~~packets~~cells and circuitry for providing said destination information to a header of a corresponding ATM cell containing packet that contains data originally included in said given one of said ATM ~~packets~~cells.